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ABSTRACT

A study looked at one problem teachers have when implementing an individualized reading program, the amount of time it can take students to choose a book to read. A database of the classroom library (consisting of about 600 novels) used by two fifth-grade language arts classes was created using Hypercard for the Macintosh. This database was interactive and included student-generated book reviews. Students were given surveys which measured attitudes towards choosing new books and influences on book choices before and after using the database. After training the students to use the database and letting them use it for 3 weeks, data showed a trend toward the database making it easier for students to find books and reflected a positive influence of peer reviews. Overall, it was found that more time was necessary for the students to acclimate to the new system and for the full advantages of the system to be realized. The students enjoyed using the new system, but needed more practice on it. (Survey instruments, an appendix of data, a lesson plan for training, a list of the books included in the database, and 17 references are attached.) (Author/RS)

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COMPUTER ASSISTED BOOK SELECTION IN THE READING WORKSHOP

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May 10, 1993

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Computer Book Selection

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ABSTRACT

This study looks at one problem teachers have when implementing an individualized reading program, the amount of time it can take students to choose a book to read. A database of the classroom library was created using Hypercard for the Macintosh. This database is interactive and included student-generated book reviews. Students were given surveys which measured attitudes towards choosing new books and influences on book choices before and after using the database. After training the students to use the database and letting them use it for three weeks, data showed a trend toward the database making it easier for students to find books and reflected a positive influence of peer reviews. But overall, it was found that more time was necessary for the students to acclimate to the new system and for the full advantages of the system to be realized. The students studied enjoyed using the new system, but needed more practice on it.

Desctiption of the Problem

During my student teaching I was fortunate to work with a teacher who is an innovator in teaching reading using a workshop format. Our students were given reading instruction using trade books only. They were shown how to choose books appropriate for their reading level and allowed to choose any book on their level that interested them, and read it at their own pace. As confusing as it was to be a novice teacher in this situation, I was a convert when I saw the difference it made in some of the poor readers in the class who had been taught from basal reading series all their lives.

One thing that frustrated me when I was in charge of this program was that some students seemed unable to choose a book from the bookshelf. There were about 600 novels to choose from, so their confusion was understandable. But the idea was to spend most of reading time in sustained silent reading, not looking for a suitable book. Some students had trouble quickly finding books in the genre they were assigned to study. So I decided to develop a database of books in the classroom library for the computer to solve this problem.

Many teachers I have spoken to have expressed concern about how to organize the literature-based reading workshop program in their classrooms. This project is intended to be a tool to help implement the program and give it a focus at the beginning of the school year. The database gives students an easy way to find a book in the genre of their choice. It also gives teachers doing a genre study a good list of books for students to choose from instead of sending them to the bookshelves and then having to constantly answer the question "Is this book historical fiction?"

What I expected to find was that students using the database would find choosing new books less frustrating after using the database. I also wanted to see if reading a review of each book in the database, written by another student in the class, would affect their choices of books. I feel that having their own book reviews in the database provides a sense of ownership to students and a way for them to find out what their friends liked about the book. It solidifies the reading-writing connection by getting students to write for an audience about the books they read and having those book reviews be a factor in other

students' choices.

Chapter two will show the reader the theoretical basis of the reading workshop, several alternative methods of implementation, and the research that shows its effectiveness. I will also discuss two commercially successful book databases, and relate the aspects of a database of classroom literature which students find most useful. The design of the study will be discussed in chapter three, which goes over the surveys I gave before and after implementation pre-tests and post-tests, and the process of creating the database. The fourth chapter will analyze the results of this project and chapter five will offer suggestions for implementation in other classrooms and further study in using databases with the reading program. I want to show the reader how easy it is to create a database like this in any classroom and how it simplifies the individualized reading program and makes the troublesome task of choosing books interactive and easier.

Literature Review

I had two questions that I needed to answer in a literature search. The first was why should a reading program be focused on literature-based-instruction? I wanted to provide for the reader an understanding of the theory and research that goes into creating and planning such a program, how such a program can be set up, and what kinds of problems teachers run into. The other question was what are the qualities of a successful database program? When I sat down to design my database, I wanted to know what kinds of things had been successful with commercial databases.

Trade Books versus Basal Readers

Why use trade books instead of basals? Many feel that basals focus more on word identification and letter-sound correspondence rather than comprehension in context, (Hansen, 1987). They also tend to take stories and change the language so there are no unfamiliar words in the text, marring the beauty of the flow of words and sentences. The text becomes choppy, and students do not learn to deal with unfamiliar words

in context, they have to refer to the vocabulary lists at the beginnings of chapters in the basal, (Hansen, 1987).

In basal series, students read one short story per week (usually in one reading class period) and then spend the rest of the week doing worksheets on that story which drive home the "correct" interpretation of the story, (Hansen, 1987). As Jane Hansen (1987) says, the "Time taken to ensure that students understood a story was often more important than time to read," (Hansen, 1987, p.120). In an individualized, literature-based approach, the time is spent entirely on reading and discussion. Hansen (1987) makes an analogy to the writing process building a community of writers. She wants to build a community of readers; readers that discuss writing and what it means to them, talk about the process of reading and see themselves as readers and interpreters of writing, (Hansen, 1987).

Basals also prevent students from learning how to choose literature for themselves by presenting a preselected list of "good stories," (Hansen, 1987). Students do not learn by trial and error how to select literature that is at their level or books they will

enjoy reading. These skills are critical to the goal of becoming lifelong readers, (Hansen, 1987).

Basals also shift students perceptions of the purpose of reading. Louise Giddings (1992) found that students that achieved high in reading see reading as a way of learning new things, and a fun activity that can be shared with friends. Students in low-ability groups think that reading is something that very smart people do, and it is just work that teachers make students do. Giddings (1992) concludes that people don't read because they want to read, but for some reason: to learn, to find information, or for a good story, (Giddings, 1992). She also found that students in basal programs tend to see reading as a procedural rather than meaningful activity, (Giddings, 1992). These students saw the purpose of reading as going through a text to answer some worksheet questions rather than to find information or to enjoy a good story. Students need to see a reason to read, a purpose behind the hard work it takes to become a good reader, before they will achieve in and love reading.

To their credit, basals do a good job of focusing on specific areas, such as word decoding and phonics

instruction. But this can also be a detriment. Hansen (1987) believes that this type of instruction where you break reading down into isolated parts and focus on specific skills areas should stop after grade two. Students then need to see reading as a whole, integrated process, (Hansen, 1987).

I've tried to outline the major arguments against using basal series in isolation. The advantages of using trade books includes the wide variety of books available to teachers attested to in guides to children's literature such as Children's Literature in the Elementary School by Charlotte Huck, Susan Hepler, and Janet Hickman (1987). With such a variety, there must be a book that will turn each student on to reading. Tradebooks use real language, not writing designed to fit a specified vocabulary list. When a teacher uses trade books, he or she has the ability to link the reading process to the writing process which Hansen (1987) discusses, and of course, that children spend most of reading time actually immersed in reading, (Hansen, 1987; Huck, 1987). There are two other factors that I want to discuss. One is the importance of ownership and how that affects reading

goals, and the other is the achievement levels of students taught in a literature-based reading program.

The Importance of Ownership

The reading workshop process has been articulated in different ways by many people. Sharon Kletzein and Barbara Conway Hushion (1992) believe that such a program has students choosing their own books to read and writing in journals regularly about their books, while the teacher directs mini-lessons about comprehension, new authors, and aspects of writer's craft. They believe that this kind of program gives students a better understanding of reading than basal instruction. Their program was designed with a concern for enhancing students' motivation to read, especially their at-risk students, (Kletzein & Hushion, 1992).

The most important facet of the reading workshop is student-selected reading materials. The students essentially create their own curriculum for reading. Nancie Atwell (1987) says that it is vital for students to have a sense of ownership over what they read in order for them to enjoy reading. It is this choice of

what to read and the focus on students' interests that makes reading fun, rather than a chore, (Atwell, 1987, p. 161). Cynthia Johnston says that "Teenagers often read to find answers to social concerns and questions," (Johnston, 1990, p. 9). Children read with interest stories that relate to their lives. Choice is essential so that students are reading books that are appropriate to their needs and interests.

Another important aspect of the concept of ownership is the use of journal writing rather than worksheets. Kletzein and Hushion (1992) believe that the program has to give students "A context that supported and valued what the students themselves chose to read ... it requires the reader to construct meaning based on interaction with the text ... it depends on the readers' understanding of themselves as readers, [and] their purposes in reading," (Kletzein & Hushion, 1992, p. 444-445). The use of journals involves choice and ownership in another way. Students choose how to react to the book. Evaluation is tied to what the student draws out of the text, and how they show what they know. Journals allow students to tell us how the book affected them, and this type of individualized

evaluation allows everyone opportunities for success. This is giving students ownership of the reading program. This sense of ownership makes reading more meaningful to the students and more fun. When students choose what they're working on, the motivation to work hard comes from inside, it is an internal rather than an external impetus to read.

The impact of literature-based reading on achievement

There seems to be a great deal more written about the theory and methods of implementation than actual research showing the effects of such a program. But what the research shows is a dramatic shift in the affective goals of reading instruction with a considerable shift in the cognitive goals.

Dr. Edward L. Robbins (1990) evaluated a program in Galveston, Texas in a sixth grade class. In this study, students were grouped into one of three ability levels. Each group was allowed a varying degree of choice in book selection for the reading program. There were some "core texts" read by all students in a group. The high and middle-level groups were allowed

to choose from a limited set of options as time went on. Reading instruction time was devoted to reading silently and aloud, discussing the books and answering questions about the books. Worksheets prepared for these books were used to test vocabulary and comprehension. This study used trade books but did not incorporate the literature-based activities used in the study discussed previously. These students were still all focused on the same activities and expected to come up with the same set of answers instead of responding to the texts in their own ways (Robbins, 1990).

Robbins (1990) was looking for improved attitudes toward reading and for growth in reading achievement as measured by surveys and a standardized test. After a year of the program, the students in the low group reported reading more at home and reading a wider variety of books and magazines. Their motivation also shifted to an intrinsic one, responding that they read because "I think I should", (Robbins, 1990, p. 4). Both the low and high groups said that they wanted reading class to last longer. Robbins found that compared to a control group using basals, 29% more students in the literature-based program wanted more

reading time in school and 21% thought reading class was fun. He says the ratio of positive responses to questions related to attitudes toward reading by students in the literature-based program to those positive responses given by students in the basal program is as high as 3 to 1. Overall, the shift in reading attitudes is judged by Robbins to have been a positive one, (Robbins, 1990).

A study done by Leslie R. Morrow (1992) of Rutgers University with minority students was designed to look for an increase in literacy skills and enjoyment of reading after using trade books along with basals in the reading program. This study ran an entire school year. Morrow used the California Test of Basic Skills, story retelling and rewriting, original story writing, and a survey on attitudes toward reading as pre-tests and post-tests to measure the impact of this program.

In the classrooms studied, Morrow set up "literacy centers" in quiet sections of the room for reading with privacy. There were shelves displaying books of many genres with characters of varied ethnic background. Children also received a subscription to the magazine Highlights for Children at home. Teachers were given

handbooks to help them organize literature-based activities. The guideline was to do three per week. Children were given time each week to engage in an independent reading-writing activity of their choice. Students were expected to read at home and their parents were asked to check up on the time spent reading.

Students were divided into four groups for the study; two that had their reading program at school and at home, one that had only the school-based program, and one control group in basal readers. The group that had both the in-school and at-home literature-based programs showed dramatic improvement, scoring much higher than the other two groups in all areas tested: oral story retelling, story rewriting, probed comprehension, original oral stories, original written stories, and language complexity and vocabulary development. Reading scores on the California Achievement Test went up 4.15 points for the literature-based group compared to 1.92 points for the basal group. One of the most telling results is that a survey showed the students in the literature-based groups reading more at home after a year of this

program. Minority students also showed improvement in almost all areas after this program, (Morrow, 1992). This study found that moving to literature achieved the cognitive and affective goals established for all students.

J. Lloyd Eldredge and Dennie Butterfield recorded similar results in their 1984 study. They tested five alternative approaches to basal reading instruction in Utah with 1,149 children in 50 different classrooms. Half of these classrooms were used as test sites for the alternative approaches and half were to use standard basal instruction. Two of the alternative reading programs were literature-based. One of them used a special decoding instruction technique. All 50 classes had ninety minutes of reading instruction per day. Student reading achievement was measured using a standardized reading test and an attitudinal survey as a pretest and posttest. The students in the literature-based instructional programs saw a greater increase in scores on vocabulary and comprehension tests and saw a greater increase on reading interest surveys than the control groups, (Eldredge & Butterfield, 1984). Students in these programs also

showed higher self-image as readers scores than control groups, (Eldredge & Butterfield, 1984). Their study shows a clear advantage for literature-based instruction when it comes to comprehension and student enthusiasm for reading.

Cynthia Johnston (1990) looked at an eighth-grade reading class in a private school to try to modify negative attitudes toward reading. After using a literature-based program, she recorded the same results we have seen previously. Her program used mini-lessons focused on comprehension, language usage, reading strategies, character development, and other literary topics. The mini-lesson was followed by silent reading for up to thirty minutes. At the end of class there would be an evaluation activity or feedback on the reading behaviors the teacher observed that day. Students would write daily in a literature journal about their books. Johnston says that she based her program on Atwell's approach in <u>In The Middle</u> (1987), even using samples from the book to show her students what she was looking for in journal entries. She used the Estes Attitude Scale as a pre-test and post-test and time spent doing silent reading in class, (as

recorded by students in their journals) to measure attitudes toward reading. She saw an improvement from 19 minutes of sustained silent reading at the beginning of the year to 28 minutes with much less distraction and better concentration by the readers at the end of the year. Students would remind her that they needed time to read if her mini-lesson was running long, (Johnston, 1990). Students went from choosing short, easy books at the beginning of the year to "making confident choices of books they liked. . . length ceased to be an issue," (Johnston, 1990, p. 31). Of the eight students she studied, seven showed a positive increase in attitude toward reading on the survey. One went down, due to some confusion about how to fill out a survey, she says. Some gains were as large as 70%. The class increased their scores on the survey by an average of 27.6%, (Johnston, 1990, p. 34-35). Individualized, literature-based instruction can change students who dislike reading at the beginning of the year into lovers of books.

These studies show an important shift in students' attitudes toward reading, one of the affective goals of reading instruction. Students enjoyed reading in

school more than before and they were reading on their own at home more often. Programs which use trade books seem to impart more enjoyment of reading than basal series do. In each case, along with allowing students to enjoy reading, these methods of instruction also seem to improve test scores and achievement. The research shows a definite advantage for literature-based reading instruction.

Although individualized reading instruction poses challenges for teachers when they first try it out, it has many benefits to offer. Most importantly, it gives students ownership of their instruction, and passes on to them a love of reading. Achievement goals are not thrown aside in the quest for the affective goals. Studies have shown that reading achievement improves by leaps and bounds over the basal programs.

Problems With Switching to this Approach

One of the biggest problems is the lack of book knowledge possessed by many teachers. "Preservice and in-service teachers need to know children's books - yet there are over 40,000 in print!" (Huck, Hepler, &

Hickman, 1987, p. vii). Teachers have to know about books if they are to respond meaningfully to what students write in their journals and to stock their shelves with good books for their students. The solution they offer is to use their guidebook to literature. With so many books out there, teachers need a guide to tell them what literature is good for students and how it can be woven into the curriculum. Some exist, such as Children's Literature in the Elementary School by Charlotte Huck, Susan Hepler, and Janet Hickman. But this is where having a database of childrens' books in the classroom would come be useful.

Another problem is how the teacher is to evaluate the students' growth as readers. Atwell (1987) and Calkins (1986) offer solutions such as "Status of the Class" sheets to keep track of what students are reading and where they are in the book, the response journals we have already discussed, and progress toward goals set in conferences with the teacher, (Atwell, 1987; Calkins, 1986). Evaluation is more individualized, and teachers need sheets to keep notes on each student after conferences and record new goals and strategies they discuss.

The biggest problem will be finally organizing and implementing the process, training students to use it and making it flow smoothly. Atwell's and Calkins' books can be used as guides to that process, as well as the other articles and studies mentioned earlier. There is no one way to implement the workshop, it has to be keyed to the teacher's individual style and way of relating to students. But there are tools that can help teachers. Computer databases would help the teacher help students find books they are interested in and help the teacher become knowledgeable about the wide variety of children's books available.

Qualities of a Successful Database?

I found two databases that seemed to be very popular in the schools and in literature, the Book Brain database and the Bookwhiz database. Both were created in the mid-1980's to run on the Apple II computer.

The Book Brain database takes the user through a series of questions to present a list of books keyed to the user's interests. It provides a summary of each

book as well as recommended titles to go along with that book. It can be customized to include books available in the library or classroom. The teacher can add up to four lines of student comments. It can search by subject, character, title or author. It also allows you to print out your findings, and add to the books in the database, (Parham, 1988).

The Bookwhiz database allows searching only by topic. It has a place for student ratings and allows the teacher to add books. It also gives a "teaser" (a quote) from the book and a short description of the book. It cross-references by author, and books about similar topics, (Clayton, 1988). Clayton says that both the Bookwhiz and Book Brain databases are among the very best because they focus on "soliciting children's interests. . . 'selling' hundreds of books in a variety of genres and. . . [provide] a forum for children's reactions," (Clayton, 1988, p. 8). These databases are successful because they work with what the children are interested in and allow for students to find out what others have said about the book.

The things that seem to be very important here are student opinions. Both have different systems that

allow the student doing the search to at least see what peers think. Both allow teachers to add. Parham did a survey of his students to see what they thought was important and they came up with the following list:

- A good list of books.
- Good descriptions of each book.
- Choosing by subject is essential.
- Guided searches (asking questions about what types of book one likes to read, what one likes to do in spare time, etc.) are a fun way of getting started.
- It's helpful to be able to narrow down the search in a lot of ways.
- Students should be able to add their own comments and ratings.
- There needs to be a way to print, (Parham, 1988).

These databases have a lot of similarities. They allow the teacher to add books and students' opinions of the books. Parham says that putting the students' reviews in is a good way to enhance the reading-writing connection. He feels that it is important to give the students an audience for their writing, (Parham, p.

71). The students seem to enjoy interacting with the database, to change it to suit their needs and interests as time goes on.

Since the key is having the database be interactive, a hypertext database seems to be the perfect medium. Hypertext software programs, such as Hypercard for the Macintosh, allow text, cards, and any other kind of information "to be cross-referenced, linked, and annotated in ways that allow the reader in nonlinear ways . . . to browse at will in much the same way as the mind must work," (Hedley, 1989, p. 211). Students can be attracted to be a book for many reasons. A hypertext database allows students to find their own way through the information.

Hypercard can include all of the items students found important in the discussion of Bookwhiz and Book Brain. Any amount of text can be tied together, a description of the book, students' comments about the book, other books by the same author, etc. Hypercard even allows the user to add in graphics and sounds, so students can see pictures from the book or even hear quotes. Hypercard is a tool that allows the user a truly interactive environment to create a database in.

Design

Setting

This project was designed with a fifth grade language arts class in mind. These fifth graders saw one teacher for language arts and social studies and another teacher for math and science, so this study examines two classes of 24 students each. The school is located in an upper-middle class development, but also serves some students on the lower end of the economic scale. There was a low level of ethnic diversity, approximately ten percent of the students in this sample were members of a minority group. There were several special-needs students mainstreamed in this sample. Reading levels varied from about second grade to a high middle-school level. Many students were new to the school this year, and had no prior experience with a reading workshop format.

In this class the reading workshop is organized based on the ideas of Atwell (1987) and Calkins (1986). At the beginning of the year, students are trained to use what the teacher calls the "Five-finger rule. " When they choose a book, students open to a page in the middle with no pictures. They then read the entire

page to themselves. Each time they come to a word they do not know, they put out one finger. When they have five fingers out, they know that the book is too tough for them and they need to choose another. This is based on the widely accepted notion that readers must understand ninety-five percent of the words on a page for it to be meaningful in an instructional sense or for independent reading, (Barr, Sadow, Blachowicz, 1990). In the first week of school students also start a "literature log. " In this notebook they record the title, genre and author of each book they read and every day before they started reading they write a prediction, based on what they already knew about the book (if it was a new book they were to look at the front and back covers). Then they read silently for twenty-five minutes. When they are finished they write a response to discuss whether their prediction was right or not, what actually happened, and how they felt about the things they read. Introducing the workshop is the subject of mini-lessons for the first few weeks. During silent reading time, individual students are called to conference with the teacher. The teacher listens to the child read, asks a few questions to

check comprehension, and suggests strategies to improve reading. The teacher also keeps a detailed record of each conference, including information about what the student is reading, what page the student is on, any strategies they discussed, and the general impression of student's reading progress. These notes are evaluated over time to see what actual growth is occurring.

Every two weeks during the first semester, the students are to turn in a letter to the teacher about their book. This letter includes a very short summary of the book, with a discussion of why the student likes or dislikes the book, how the book makes the student feel, and anything that the student sees in the book that relates to his or her life. After the first grading period, the teacher moves away from that format into monthly genre units and requires students to do one monthly project instead of letters. These projects can be reports, posters, mobiles, presentations to the class, or anything else the students choose.

Method

When the study started, the class had been using the reading workshop format for six months. The first thing I did was give a survey to find out what aspects of the reading program the students found most difficult. I decided to offer them six aspects of the reading program to rank from easiest (1) to most frustrating or difficult (6). This survey is labeled "Survey One" in Appendix A. I wanted to see how tough they found choosing a new book compared to other aspects of the reading program. I expected to see that item rank closer to 1 after using the database for a few weeks. A few days later I gave a second survey, ("Survey Two" in Appendix A), to ascertain how students chose books to read and what kinds of things were important to them when looking for a new book, ranking five items from most important (1) to least important (5). I wanted to see where they place other students' opinions, so that I could monitor a change in the influences of their peers on book selection. There was also a space for free response for them to add anything that I had left out that was important to them. I expected that after using the database, students would rank peer opinions as more important when selecting

books. There was a question to draw out what exactly they did when they needed a new book to read. I created the last two items on this survey to reflect how students saw the process of finding a new book; if they felt like it took them a long time and if they felt like they were consistently choosing the wrong books. This gave me another way of measuring any change in the frustration caused by choosing new books. Surveys one and two were designed to be both pretest and posttest.

The third survey was to be given only after use of the database (survey three in Appendix A). I wanted a record of how many times students had used the database, another way of measuring the importance of student-generated book reviews, a question to probe whether or not the database would receive more use in the future, and finally, a place for students to respond with their ideas about changing the database. I designed this survey to get student feedback on the database itself, what they wanted to see in it. I felt that open-ended responses allowed them to be more flexible than a list of options.

Creating the database

My database is not an actual database program in the traditional sense. It was created using Hypercard version 2. 1 on a Macintosh computer. It is an interactive Hypercard stack. Every book is placed on a "card. " A card is one screenful of text and graphics. These cards are linked together using "buttons. " A button allows the user to change to another card anywhere in the stack, not just the next one in sequential order. The user creates a new pathway through the stack each time it is used. So the stack is interactive, it allows the user to choose the direction he or she wants to take through it. I organized the books by genre, because the teacher works by doing units on each genre. When students start up the application, they see a title screen and then a list of genres. By using the mouse pointer to click on the genre of their choice (on a button), they move to a list of books in that genre. Each book title is printed on a button so that students move the mouse pointer to that button and click, and they are shown the card for that book. The two genres with the most

entries, realistic fiction and fantasy, also have an option to let students see books organized by author.

When they get to the book's card, they see a picture of the book cover, the title and author, and the text from the back cover of the book. The front covers were scanned in using an Apple Color OneScanner and Hyperscan software. The list of books chosen by myself and the teacher in this classroom is included in Appendix D. There are also two buttons, one that allows the user to return to the list of titles, and one that "pops up" a window with a student-written book review in it. The students were asked to write two book reviews in lieu of their monthly reading project, and were told that their book reviews were going to be part of the database I was creating.

I trained the students to use the "Book Chooser" using the lesson plan and materials contained in Appendix C. The students used the database for a three-week period, at the beginning of which there was a heavy snowfall, closing the school for three days. They were told that they could use it in the morning before school started, during recess time, and at the beginning of reading time each day. I felt that this

provided them with enough opportunities to use the database and become familiar with it.

Analysis

The data was sorted into tables using a simple count of the number of responses. I also looked at the frequencies of types of responses to the open-ended questions. These tables are in Appendix B. Data is given for the morning class, the afternoon class and the overall total combining the two sets of data. This separation is to show any variance between the classes. Each class has different strengths and weaknesses, and I wanted to be able to account for that in my analysis. I chose to analyze by percentage of students giving each response so that the reader can see any shift in a proportional sense. The pre-test and post-test had different numbers of respondents, and a simple numerical listing does accurately reflect any trends.

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Interpretation of the data

Data

The results of the pre-test and post-test surveys are given in full in Appendix B. I will highlight results of the surveys here briefly and then discuss what the data shows us about the computer book chooser.

The pre-test showed that the highest number of students in the morning class and overall ranked "Choosing a new book quickly" as the toughest part of the reading program, finding reading for 25 minutes and writing predictions to be the easiest parts. The afternoon class found it to be one of the easier aspects, labelling writing predictions and responses as the more difficult parts of the program.

On the second survey. "Classmates' opinion" was ranked by most students as one of the less important factors in choosing a new book. Only eleven percent overall said it was the most important and thirty-two percent ranked it as number two. There was not a very significant discrepancy between the morning and afternoon classes. Students responded to the question "What other things are important to you when you pick a

new book?" with answers such as "genre," "title," and "reading level." When asked what they did when they needed a new book, most said things like "Look on the bookshelves," "do the five-finger rule," and "ask teacher."

In response to the question "How often do you find yourself reading a book that you decide is wrong for you?" most students on the pre-test said "sometimes." Only about one third of the students responded that it happened "often" or "very often." Just over one third of the students saw a problem with how long it took them to find a new book to read, responding that it took them "A long time" or "a while" to choose a new book.

The post-test was given after three weeks of using the database. In the morning class 22% of the students ranked the target item "Choosing a new book quickly" as number six, the toughest part of the reading program. Still over half the students ranked it at or above number four.

On survey two, over one-third of the students ranked "Classmate opinions" as the number two or number one most important factor in choosing a new book. "Use

the computer" appeared in nearly half of the answers to the open-ended question about what students do when they look for a book. No student responded that they often found that they were reading a book that wasn't right for them, while eighty percent said that that happened either "sometimes" or "never." Two-thirds of the students said that it took them "Not long" or "no time at all" to find a new book, while ten percent said that it took them a "long time."

Survey three found that during the test period, two students used the book chooser four times, two students had used it three times, seven had used it twice, ten students had used it once, and twenty-two, half of the sample, had never used it at all. Fifteen of those that had never used it were in the afternoon class. Twenty-nine students said that they thought the book reviews were useful, while four were unsure and two said they were not. Thirty students said that they would use the book chooser in the future, while four were unsure and five said that they would not.

Trends

The data show small but significant shifts in the students' attitudes. Rankings for the item "Choosing a New Book Quickly," shifted toward easier, (see Table 1). The most profound shift can be seen in the morning group, in which 47% of the class ranked it #6 (most difficult) on the pretest, while 22% ranked it #6 on the posttest. The afternoon class showed a less dramatic change, going from 10% to 8%. For both classes combined, it went from 27% to 20%. Overall, in the pretest, 58% of the students put this item at or above #4, and in the posttest, 55% ranked it at or above #4. The shift is far more dramatic in the afternoon class, starting at 50% and changing to 37%. There was a slight, but definable shift away from ranking it as a difficult or frustrating part of the reading program. Students seemed to find it easier to choose books to read. Given more time to get used to the program, we would probably see more dramatic shifts in these statistics.

I think the reason that we see a greater shift in the morning group is shown in Table 6. Many more students in the morning group used the database. There is a simple explanation for this disparity. In the

afternoon class there is a student on whose IEP it is mandated that he use the computer for all writing whenever possible, due to a handicap in motor coordination. So the computer was not always available for the afternoon group during reading time.

The qualitative data shows more positive results. The second survey also asked the question "What do you do when you look for a book?" Students in the posttest overwhelmingly responded that they go to the computer to use the database, (see Table 3). That response was cited most by students in both classes in the posttest. It is becoming a regular part of the reading program.

In Table 4, we see the responses to Survey two's question about how often they choose a book that is not right for them, either because it is too hard or too easy or they don't like it. There was a tremendous decrease in the frequencies of "Very often" and "Often." Students seem to be choosing better books after using the Book Chooser for three weeks.

Table 5 shows responses to "How long does it take you to find a book?" There was a slight trend away from the responses "A Long Time" and "A While. " Looking just at the morning class, where more students used the

database, we see a more dramatic shift toward less time taken to choose books, an important attitudinal change if they're finding it easier. There was a sample size increase of seven students in the posttest, which accounts for a shift in the data but this class also saw a shift on the ranking of "Choosing a new book quickly" toward being easier.

On the third survey students answered the question "Will you continue to use the Book Chooser? Why or why not?" The responses are summarized in Table 7. Students gave comments such as "It is fun to use," "It is a faster way of picking a book," and "Yes, because it is easy. " It seems that 20 of the 35 respondents found it easier to use the Book Chooser than to go to the shelves directly. Those that answered "No" gave reasons such as "It takes to long," "I don't know how," or "I know what book I want. " In the first and second cases, further use of the machine with teacher guidance could change those attitudes, and with the third case, with more books in the database, the student will probably be enticed to use it when he or she is stumped for a book to read.

Will an interactive database of a classroom

library make it easier for students to choose books faster? Yes, it will, given time and training. Time is needed to increase the number of entries in the database. Looking at the data for the response to the fourth item on the third survey, in both classes, the most popular suggestion for improvement is to add more books to the database. The teacher can train the students to do this themselves, thus lightening his or her load in maintaining the database, and increasing student ownership of the program. Had it not been for snow days and spring break interrupting their use of the system, they would have had used the system more and become more familiar with it. One has to account for lag time when implementing a new system, before it shows any effects. The afternoon class is at a disadvantage because of the student in that class whose IEP requires the use of the computer for all writing activities, preventing them from using the database at any other time than before school or during recess. Given time, I think a more dramatic shift would show up.

Did using the book reviews make it easier for students to find books they like? The data in Table 2

is inconclusive. If there is any shift, it is toward classmate's opinions becoming less important. One possible reason for this is the wording of the survey. The item I was expecting to see change was "Classmate's Opinions." If I had worded the survey to say "Book Review on the Book Chooser," I may have seen a bigger shift. So here I would rather turn away from the quantitative information and look at the answers to free response questions on survey 3, summarized in Table 8. Students overwhelmingly said that the reviews were important to them, because they "tell about the book," and "because if someone else likes it then I probably will." Students responded that they liked getting an idea of what the book was about and why some peers enjoyed it. Those that responded that book reviews didn't help them said that it was because "Sometimes the reviews aren't very good," or "Sometimes they like books I don't like." The first response can be taken care of with quality control over writing reviews. These reviews were part of the classes' reading evaluation, one of their monthly book projects. If the teacher uses them as a part of writing workshop instruction, then the students have the opportunity to

revise and peer conference to improve them. With that kind of practice they'll get used to what their peers want to know about the books when they read reviews and write better reviews. Again, this is a factor of time.

The last piece of data I want to discuss is the last item on the third survey. The students' responses to the question "What kinds of things would you change about the computer book program?" are sorted in Table 9. The most popular change to make was to add more books to the program. Nine percent also responded that they wanted more genres represented in the database. That could be one factor contributing to students not using the database as much as I had hoped. There were not enough books there for many of the students. Many of the books in the database were suggested by the teacher and had been recommended to the students by her already. So most of the students had already run across many of the books in the database and either read them or decided against reading them. With a wider assortment of books in it, I think that students will use it more often.

Next on the list was to create a system that tells

whether books were in or not. Part of that had been done, with asking students to write the title they chose on a sheet next to the computer and put a check on one line when they had finished and returned the book. But that was inefficient; it's easy for the students to forget to do that. The kids wanted to know whether the book was in before they went to the shelves to look for it. This would save them a lot of time, and further the original goals of the program.

Closely behind that system, 14 percent of the students asked for a way of finding out the reading level of books before going to the shelves. This would prevent them from wasting time going after a book that was above their reading level. The possibilities for this type of system will be discussed in the next chapter.

A lack of book reviews was a problem in the database. Seven percent of the students asked for more book reviews, several suggesting that the teacher write them. The solution to this problem comes with time. After the database is in use as a part of the regular reading and writing program, the teacher should have plenty of book reviews in the database.

Many of the other suggestions are aesthetic. Seven percent wanted color on the database. This would increase the size of the database files, however, and may not be feasible depending on the size of the hard disk in the Macintosh used by the teacher. Another seven percent wanted to use the keyboard instead of the mouse. For a few students it was tougher to use a mouse than to use the keyboard. No one else suggested any changes that would take the place of using the mouse or change the method of choosing titles. Perhaps this problem could be solved by making the title boxes bigger and leaving more space between them.

Thirty-five percent of the students said they would change nothing about the database. This number may be inflated because they couldn't think of anything or wanted to turn the survey in and go to lunch, but nonetheless, this is an encouraging sign. It shows that they enjoyed this system of choosing books. That is a great accomplishment in and of itself. What Table 1 shows is that a difficult task has become more fun.

Conclusions

It seems that the study shows a need for extensive use of the database for it to be truly effective. The database has to be in place as a regular part of the classroom activities for a year. Then we may see a real difference in the amount of time it takes students to choose a book and a real impact of student-generated book reviews on book choices. But the trends shown by these classes say that it will succeed.

Implementing the database

When implementing this in another classroom, there are several changes I would suggest. The most important one is to start it off at the beginning of the year with about 100 books that I really want students to consider reading. Ask them, for their first evaluation project, to write a critical review of the book they read. Put all of those reviews in, and expand the database to include books at all reading levels. If the database is the method to use to find new books from the first day of school, students will get used to it, and its potential for speeding up book selection will be realized.

I would implement a tentative system of letting students know what reading levels books were at. Those books that were the easiest to read I would put in a category called "FLUENCY BOOKS." Then next step up, for books with low to grade-level reading difficulty, I would put in a category called "COMPREHENSION BOOKS." For books at or above grade-level difficulty, I would mark them "VOCABULARY BUILDERS." Those books that were tough to read, and very high above grade level I would

call "MIDDLE SCHOOL BOOKS." Under each genre, books would be sorted into these categories. A book could easily be in two categories. The teacher can always tell a student that a book can shift categories depending on the reader. I would suggest that an above-grade-level reader use a "Comprehension book" in place of a "fluency book."

The reason I would use these labels, is that they reflect the reasons why I would suggest books to students. A lot of times students need an easier book to read to build fluency. If they know most of the words in the book, then they can read it faster and build their fluency. Students are likely to run across unfamiliar words in higher level books, so calling books that are just above grade level "vocabulary buildérs," seems appropriate. The teacher in the fifth-grade class I worked with on this study used the term "Middle school books" to describe any book that was high above grade level. These are books that most of the fifth-grade class won't be ready for until they are in the seventh or eighth grade.

I do have a lot of reservations about using a leveling system such as this. What do the students who

are always in "Fluency" books think about their reading ability? A lot of this can be taken care of if the teacher is tactful in suggesting that the student choose another fluency book, or allow the student to attempt a higher level book with a great deal of scaffolding. The student would have to be conferenced with more regularly than usual while attempting such a book. If I were to try this out, I would want to very carefully monitor my students' self-images as readers, and work very closely with those who were attempting tougher books.

I would like to create a system that would allow students to know if a book was in or out. Perhaps the best thing to do would be to organize the shelves by genre, so that students would know easily where to find the book they had chosen from the database. The disadvantage to organizing the shelves like this is that it prevents students from running their eyes across the shelves and stumbling across interesting titles that they may want to read later. But in the classroom this was being used in, the students were required to choose books from the genre under study. So they would not be able to choose those books that

jumped out at them. Of course, on the database, they get a list of titles, and some of those may jump out at them.

One student suggested having a box for each copy of the book the classroom had on every card in the stack. When a student chose that book, he or she could make a mark in that box indicating that the book was out. However, students regularly forget to check their books back in, forgetting to return the sign-out card to the book before putting it back on the shelf. It would be possible to do away with the card-sign-out system and have the students write their names in a field on the card in the database. But that has the hazard of being forgotten. This is also something that would require careful training for the students and monitoring by the teacher.

But all of these changes show a great potential. If they do increase students' happiness with the database, it will get more use and students will be able to select books faster. The trends shown in the data indicate that the database is effective in moving students through the process of finding a new book faster. This gives them more time to be actually

reading, which is the [illegible]int of the reading workshop.

One other change [illegible]would implement is that once students were comforta[illegible]e using the database, I would train them to add book[illegible] to it themselves. This is a plan I will attempt in [illegible]his fifth-grade class. The students could then be [illegible]esponsible for adding to the database. This lighte[illegible] the teacher's load. After one year of doing this, th[illegible]teacher will have a full database, with hundred[illegible]of books and book reviews, ready for the next yea[illegible] The next year, of course, the teacher would want to [illegible]egin replacing the previous year's reviews with cu[illegible]ent students' reviews, but they could still read the o[illegible]l ones until they got up to speed with the databas[illegible]. This system could be self-perpetuating.

With the trends t[illegible]ward the use of individualized instruction and the sw[illegible]eping reforms of whole language, teachers need to have [illegible]olid structures to help them implement these revolu[illegible]ionary systems. I propose that this computer database [illegible]could be used as an effective tool to organize the r[illegible]ading workshop and tie together the students reading a[illegible]d writing interests. The students will experien[illegible]e a tremendous sense of

ownership in their program, choosing their own books and creating their own curriculum, and then writing the book reviews that become part of the database and help other students choose new books. Technology is also successfully woven into the curriculum in reading and writing in a meaningful way. Using this type of program validates the students' own interests and opinions, allowing each student to choose books they want to read and influence others. This system is an excellent way to start out a reading program based on the principles of individualized instruction.

Appendix A

Survey One

Please read all of the following list. These are parts of our reading program. Rank them in order from what you think is best about it to what you find most frustrating or difficult. Start with a "1" for what is best and go to _**_ for the most frustrating.

___ Choosing a new book

___ Writing predictions

___ Writing responses

___ Reading for 25 minutes straight through

___ Doing book projects

___ Reading with the teacher in conferences

Survey Two

Please answer the questions below with complete sentences.

1. When you look for a new book to read, what do you do?

2. Please rank these things in order of how important they are to you when you choose a book to read (most important = 1, least important = 5):

___ Classmates' reviews of the book

___ The cover

___ Teacher's opinion of the book

___ Description of the book on the back cover

___ The author (you liked other books by this author)

(Survey 2 continued)

3. What other things are important to you when you pick a new book?

4. How often do you find yourself reading a book that you decide isn't right for you? (Circle one)

Very often Often (about half of the time) Occasionally Never

5. How long does it take you to find a new book?

A long time A while Not long No time at all

Survey Three

Please answer these questions with complete sentences. This is an anonymous survey, so do not put your name on this sheet.

1. How many times have you used the computer program to help you choose a book? ____

2. Does it help you to read book reviews that other students write? Why?

3. Do you think you will use the computer book program more? Why or why not?

4. What kinds of things would you change about the computer book program?

Appendix B - Data

Table 1

Survey 1

Frequency of ratings for item "Choosing a New Book Quickly"

Pre-test	6	5	4	3	2	1	Sample
Morning	8	2	2	1	3	1	17
	47%	12%	12%	6%	18%	6%	
Afternoon	2	2	5	1	5	3	18
	11%	11%	28%	6%	28%	17%	
Total	10	4	7	2	8	4	35
	27%	11%	20%	6%	23%	11%	

Post-test	6	5	4	3	2	1	Sample
Morning	4	6	3	2	1	2	18
	22%	33%	17%	11%	6%	11%	
Afternoon	4	2	3	5	5	4	23
	17%	9%	13%	22%	22%	17%	
Total	8	8	6	7	6	6	41
	20%	20%	15%	17%	15%	15%	

Table 2

Survey 2

Question 1 - Frequency of ratings for item "Classmates' Opinion"

Pre-test	5	4	3	2	1	Sample
Morning	0	9	5	6	2	22
	0%	41%	23%	27%	9%	
Afternoon	3	4	1	6	2	16
	19%	25%	6%	38%	13%	
Total	3	13	6	12	4	38
	8%	34%	16%	32%	11%	

Post-test	5	4	3	2	1	Sample
Morning	2	6	5	2	3	18
	11%	33%	28%	11%	17%	
Afternoon	1	6	7	4	5	23
	4%	26%	30%	17%	22%	
Total	3	12	12	6	8	41
	7%	29%	29%	15%	20%	

Table 3

Survey 2

Question 3 - Categories of responses given by students

	Morning		Afternoon		Total	
Pre-test	N	%	N	%	N	%
5-Finger rule	8	36	4	25	12	32
Look on shelves	5	23	3	19	8	21
Description on back	4	18	4	25	8	21
Author	2	9	0	0	2	5
Recommendations	3	14	4	25	7	18
Look at pictures	1	5	0	0	1	3
Title	1	5	0	0	1	3
Genre	1	5	1	6	2	5
Awards	0	0	1	6	1	3
Post-test						
Use the computer	10	53	10	43	20	48
Look on shelves	9	47	7	30	16	38
Get recommendations	3	16	4	17	7	17
Look for an author	2	11	0	0	2	5
Look at front cover	1	5	0	0	1	2
Description on back	1	5	0	0	1	2
5-Finger rule	1	5	7	30	8	19
Look for a genre	1	5	1	4	2	5

Table 4

Survey 2

Frequencies of responses to question 4

Pre-test	Very Often	Often	Sometimes	Never
Morning	2	6	13	1
	9%	27%	59%	5%
Afternoon	1	3	11	2
	6%	18%	65%	12%
Total	3	9	24	3
	8%	23%	62%	8%
Post-test				
Morning	0	2	17	0
	0%	11%	89%	0%
Afternoon	0	2	10	11
	0%	9%	43%	48%
Total	0	4	27	11
	0%	10%	64%	26%

Table 5

Survey 2

Frequencies of responses to question 5

Pre-test	Long Time	A while	Not Long	No Time At All
Morning	0	11	11	0
	0%	50%	50%	0%
Afternoon	1	2	11	2
	6%	13%	69%	13%
Total	1	13	22	2
	3%	34%	58%	5%
Post-test				
Morning	1	7	9	2
	5%	37%	47%	11%
Afternoon	3	4	14	2
	13%	17%	61%	9%
Total	4	11	23	4
	10%	26%	55%	10%

Table 6

Survey 3 - N = 43

Frequencies of responses to question 1

	Number of students		
Times Used	Morning	Afternoon	Total
4	1	1	2
3	0	2	2
2	4	3	7
1	9	1	10
0	7	15	22

Table 7

Survey 3

Frequencies of responses to question 2

Category	Morning	Afternoon	Total
Tells about book	8	4	12
Why people liked the book	5	7	12
If they liked it, so will I	3	2	5
Maybe (If they have good taste)	0	4	4
No (Sometimes reviews are no good)	1	1	2

Table 8

Survey 3

Frequencies of reasons given with "YES" responses to question 3

Category	Morning	Afternoon	Total
Helps me find book	6	2	8
Book reviews	1	4	5
Fun to use	1	1	2
Faster to use it	3	2	5
Easy to use	2	0	2
Don't have to go to shelves	3	1	4
Sorts books by genre	0	1	1
No reason given	0	3	3
Maybe	2	2	4
No	2	3	5

Table 9

Survey 3

Frequencies of responses to question 4

Category	Morning	Afternoon	Total	
System to tell if book is in or out	1	6	7	16%
Show reading level	5	1	6	14%
More books	7	4	11	26%
More genres	3	1	4	9%
More book reviews	2	1	3	7%
Organize book shelves by genre	2	0	2	5%
It takes too long to switch genres	1	0	1	2%
Use color with computer program	0	3	3	7%
Use keyboard instead of mouse	0	3	3	7%

Appendix C - Lesson Plans for Training Students

Lesson Plan:

Objectives:

-Students will be able to use the mouse to point and click.

-Students will be able to use a hypercard button.

-Students will be able to use the book chooser to find books.

Materials:

Overheads of opening screen, genre list, title screens, book cards for Shiloh and Stepping on the Cracks with and without review field showing.

Procedures:

1. Introduce the Book Chooser. Explain that it has been created as a way to help students choose books to read in a faster, easier manner.
2. Ask how many students have used a Macintosh before? How many have used Hypercard before?
3. Put overhead with opening screen on projector. Point out the continue button. Explain that a button either moves you to a new screen or shows you a book

review. Point to the Continue Button and ask a student familiar with the Macintosh to explain how to move the pointer and click.

4. Put "Genre List" on overhead. Ask students to go through steps to choose a genre. Choose Realistic Fiction.

5. Go through the selection of Shiloh, pointing out the list of titles, then going through clicking on a title, seeing the card for Shiloh displayed, using the book review button to read the book review, and returning to the titles screen.

6. Show the students the "Book Chooser Log Sheet. " Show them how I would fill it out after choosing Shiloh.

7. Repeat steps 3, 4, 5, and 6 for choosing Stepping on the Cracks from Historical Fiction. Ask the students to give you all directions.

8. Ask who will be looking for a new book to read today? Choose three or four volunteers that actually need a book to go over to the computer and use the program while other students watch. Make sure that students who watch rotate from the front to the back so that everyone gets a chance to see it up close.

Appendix D - A list of books contained in the database

Henry and Beezus	Beverly Cleary
Ralph S. Mouse	Beverly Cleary
Shades of Grey	Carolyn Reeder
The War With Grandpa	Robert K. Smith
The Indian in the Cupboard	Lynne Reid Banks
Chocolate Fever	Robert K. Smith
Our Sixth Grade Sugar Babies	Eve Bunting
The Witches	Roald Dahl
Unclaimed Treasures	Patricia MacLachlan
From the Mixed Up Files of Mrs. Basil E. Frankweiler	E. L. Konigsburg
The Pinballs	Betsy Byars
The Bully of Barkham Street	Mary Stolz
The Year Mom Won the Pennant	Matt Christopher
Stinker From Space	Pamela F. Service
My Side of the Mountain	Jean Craighead George
Strider	Beverly Cleary
Just As Long As We're Together	Judy Blume
The Summer of the Swans	Betsy Byars
How To Fight a Girl	Thomas Rockwell
A Wrinkle in Time	Madeleine L'Engle

Computer Book Selection 65

Charlie and the Chocolate Factory	Roald Dahl
On the Far Side of the Mountain	Jean Craighead George
Beezus and Ramona	Beverly Cleary
Fudge-A-Mania	Judy Blume
Socks	Beverly Cleary
Bingo Brown and the Language of Love	Betsy Byars
Ramona Forever	Beverly Cleary
A Taste of Blackberries	Doris Buchanan Smith
Boy	Roald Dahl
The Canada Geese Quilt	Natalie Kinsey-Warnock
Stone Fox	John Reynolds Gardiner
Ramona and Her Mother	Beverly Cleary
Ramona the Pest	Beverly Cleary
A Dog on Barkham Street	Mary Stolz
Anastasia Again!	Lois Lowry
Matilda	Roald Dahl
The Burning Questions of Bingo Brown	Betsy Byars
Caddie Woodlawn	Carol Ryrie Brink
James and the Giant Peach	Roald Dahl
Mr. Popper's Penguins	Richard and Florence Atwater
The Doll in the Garden	Mary Downing Hahn
The Wednesday Witch	Ruth Chew

Computer Book Selection 66

The Magic Hat of Mortimer Wintergreen	Myron Levoy
The Chocolate Touch	Patrick Skene Catling
The Enormous Egg	Oliver Butterworth
George's Marvelous Medicine	Roald Dahl
Baseball Pals	Matt Christopher
Bunnicula	Deborah and James Howe
The Basket Counts	Matt Christopher
Johnny Long Legs	Matt Christopher
Traitor: The Case of Benedict Arnold	Jean Fritz
Anastasia Has the Answers	Lois Lowry
Babe the Gallant Pig	Dick King Smith
The Secret of Nimh (Mrs. Frisby and the Rats of Nimh)	Robert C. O'Brien
The Cricket in Times Square	George Selden
The Twits	Roald Dahl
The BFG	Roald Dahl
Nighty-Nightmare	James Howe
Key to the Treasure	Peggy Parish
The Hideout	Eve Bunting
The Wonderful Story of Henry Sugar, and 6 More	Roald Dahl
The Dollhouse Murders	Betty Ren Wright
The Ghost Children	Eve Bunting

Computer Book Selection 67

Danny, the Champion of the World	Roald Dahl
The Fairy Rebel	Lynne Reid Banks
Stuart Little	E. B. White
Shiloh	Phyllis Reynolds Naylor
Number the Stars	Lois Lowry
Charlotte's Web	E. B. White
Dear Mr. Henshaw	Beverly Cleary
The Great Gilly Hopkins	Katherine Paterson
The Sign of the Beaver	Elizabeth George Speare
Tuck Everlasting	Natalie Babbitt
On My Honor	Marion Dane Bauer
Maniac Magee	Jerry Spinelli
Sarah, Plain and Tall	Patricia MacLachlan
How To Eat Fried Worms	Thomas Rockwell
Bridge to Terabithia	Katherine Paterson
Anastasia Krupnick	Lois Lowry
The Best Christmas Pageant Ever	Barbara Robinson
Roll of Thunder, Hear My Cry	Mildred D. Taylor
Esio Trot	Roald Dahl
The Phantom Tollbooth	Norton Juster
Hatchet	Gary Paulsen
Pedro's Journal	Pam Conrad
Dragonwings	Lawrence Yep

Computer Book Selection 68

Afternoon of the Elves	Janet Taylor Lisle
Stepping On The Cracks	Mary Downing Hahn
Charley Skedaddle	Patricia Beatty

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